

Instruction Manual

30-2853 HIGH OUTPUT IGBT COIL



Introduction:

The model **30-2853 HO IGBT Coil** is specially designed for racing applications and does not require a CDI or external Igniter to function. This is a very high energy coil so you must take special attention to the quality of the connections. Make sure to apply a liberal amount of dielectric grease to the connector terminals and the tip and body of the spark plugs. Failure to do this may cause arcs to the cylinder head and cause a misfire.

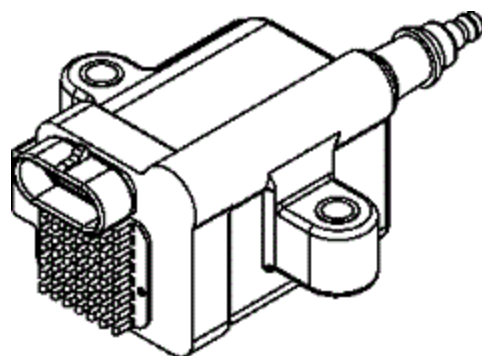
Kit Contents:

The 30-2853 Kit Contains:

- 1 High Output IGBT Coil
- 1 Mating Connector & 6 Contacts

Specifications:

Output (no load):	40kV minimum
Output (50pF load):	40kV +/- 10%
Output Energy:	103 mJ +/- 7%
Peak Secondary Current:	102 mA +/- 10%
Arc Duration:	2.9mS +/- 10%
Turns Ratio	71:1
Maximum Current:	19 Amps
Maximum Battery Voltage:	17 Volts
Base Dwell:	3.0 mS
Max Continuous Dwell:	9 mS but don't exceed 40% duty cycle
Max Intermittent Dwell:	80% duty cycle, 5 seconds maximum
Mating Connector:	Packard/Delphi 12162825 "Pull to Seat"
Mating Contacts:	Packard/Delphi 12124075 "Pull to Seat"
High Tension Wire Terminal:	HEI "spark plug top" Style



Pinout:

- A: Coil Trigger (0-5V signal)
- B: Coil Trigger (Ref Ground)
- C: Ground to Cylinder Head
- D: Battery Ground
- E: Battery Positive (Relay or switched ignition)

Important!

The contacts are "Pull to Seat" meaning you must feed the wire through the connector housing BEFORE you crimp on the contacts. The wire is then pulled back into the housing and the contact locks in place. The contact

Instruction Manual

30-2853 HIGH OUTPUT IGBT COIL



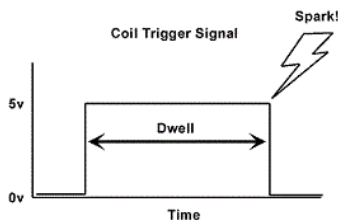
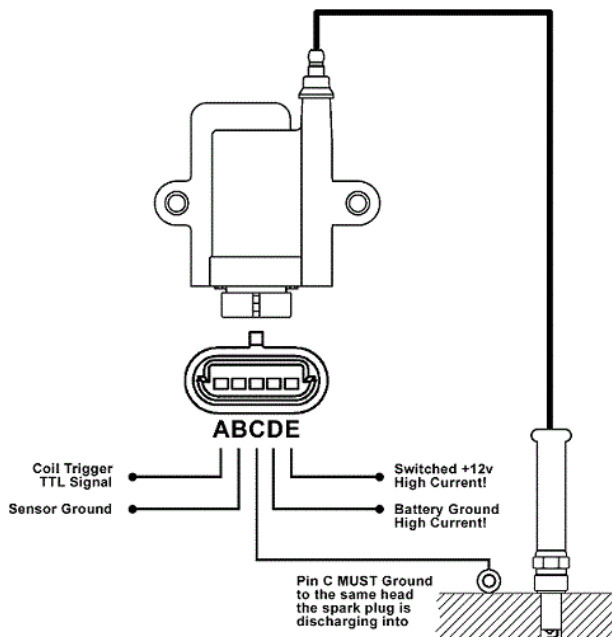
cannot be inserted or removed from the rear (wire side entry) of the housing

Dwell:

When setting the dwell the following guidelines should be used:

- Target a base dwell time of 3mS and *only* increase it when needed due to high cylinder pressures.
- The maximum individual coil dwell "ON" time must not exceed 9mS at any time, regardless of engine RPM. Exceeding this time will cause the coil to overheat and fail.
- For continuous duty the maximum "ON" time must remain below 40% duty (on 40% of the time, off 60% of the time). Exceeding this will cause the coil to overheat and fail.
- For short bursts, the coil dwell can go as high as 80% "ON" duty but these forays need to be short (under 5 seconds or so) and cannot be frequent.

Wiring:

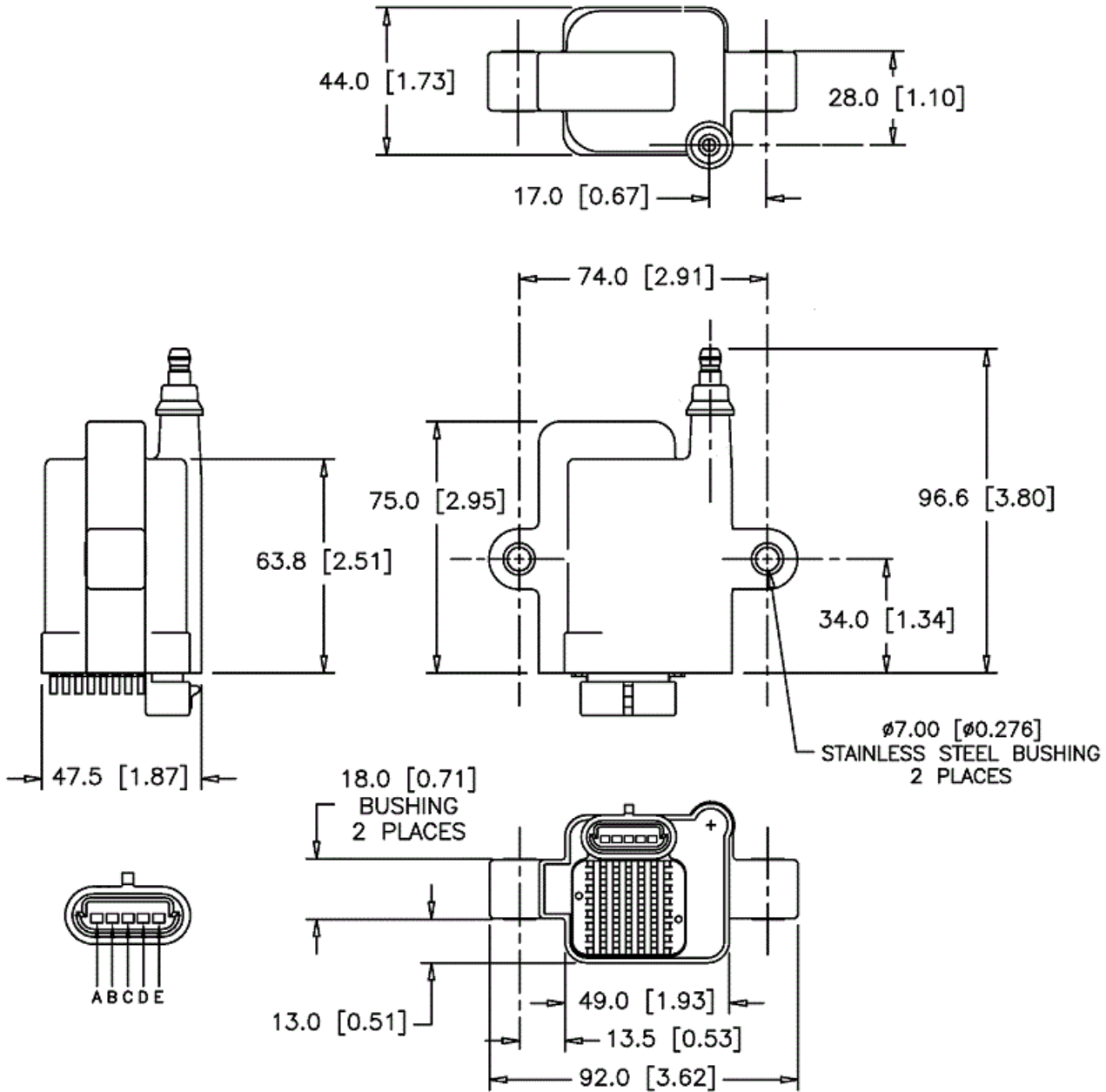


Instruction Manual

30-2853 HIGH OUTPUT IGBT COIL



Dimensions:



Warranty

Advanced Engine Management Inc. warrants to the consumer that all AEM High Performance products will be free from defects in material and workmanship for a period of twelve (12) months from date of the original purchase. Products that fail within this 12-month warranty period will be repaired or replaced at AEM's option, when determined by AEM that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of the AEM part. In no event shall this warranty exceed the original purchase price of the AEM part nor shall AEM be responsible for special, incidental or consequential damages or cost incurred due to

Instruction Manual

30-2853 HIGH OUTPUT IGBT COIL



the failure of this product. Warranty claims to AEM must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 12-month warranty period. Improper use or installation, accident, abuse, unauthorized repairs or alterations voids this warranty. AEM disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by AEM. Warranty returns will only be accepted by AEM when accompanied by a valid Return Merchandise Authorization (RMA) number. Product must be received by AEM within 30 days of the date the RMA is issued.

UEGO oxygen sensors are considered wear items and are not covered under warranty.

Please note that before AEM can issue an RMA for any electronic product, it is first necessary for the installer or end user to contact the EMS tech line at 1-800-423-0046 to discuss the problem. Most issues can be resolved over the phone. Under no circumstances should a system be returned or a RMA requested before the above process transpires.

AEM will not be responsible for electronic products that are installed incorrectly, installed in a non-approved application, misused, or tampered with.

Any AEM electronics product can be returned for repair if it is out of the warranty period. There is a minimum charge of \$50.00 for inspection and diagnosis of AEM electronic parts. Parts used in the repair of AEM electronic components will be extra. AEM will provide an estimate of repairs and receive written or electronic authorization before repairs are made to the product.